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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/515,978	02/25/2000	Gerald M. Benson	55250US002	9164
32692 7590 03/16/2009 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER CHEVALIER, ALICIA ANN				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
03/16/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

09/515,978

Applicant(s)

BENSON ET AL.

Examiner

ALICIA CHEVALIER

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-14, 16-37 and 40 is/are pending in the application.
- 4a) Of the above claim(s) 9-14 and 24-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-23 and 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

RESPONSE TO AMENDMENT

1. Claims 9-14, 16-37 and 40 are pending in the application, claims 9-14 and 24-37 are withdrawn. Claims 1-8, 15, 38 and 39 have been cancelled.
2. Amendments to the claims, filed on December 2, 2008, have been entered in the above-identified application.

REJECTIONS

3. **The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.**

Claim Rejections - 35 USC § 102

4. Claims 16-23 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Nilson et al. (U.S. Patent No. 5,657,162).

Nilson discloses a compound substrate comprising a replicated substrate having a structured surface (*microprisms, col. 2, lines 43-44, figure 2, ref. #26*), a machined substrate (*metallic deposits, col. 2, lines 48-49*) piece and/or discrete pieces embedded in a portion of the structured surface of the replicated substrate (*figure 2*) and at least one cube corner element that has at least one constituent face disposed on the replicated substrate and a least another constituent face disposed on the machined substrate piece (*figure 2*). Each of the first and machined substrate have an exposed surface that defines a face of a cube corner element on the compound substrate (*figure 2*).

The cube corner element has a cube height of no greater than about 1 mm (*col. 2, lines 64-67*) and the at least one constituent face and the at least another constituent face are disposed on opposite sides of a transition line that is nonparallel to a dihedral edge of the cube corner element (*figure 2*). The at least one constituent face and the at least another constituent face are disposed on opposite sides of transition line, wherein substantially all transition lines are parallel to a reference plane (*figure 2*). The cube corner element is deemed to have an outline in plan view selected from the group of shapes consisting of a hexagon and a quadrilateral. The structured surface of the replicated substrate includes cavities and discrete pieces of the machined substrate comprising a plurality of pyramids that are adjacent to the cavities and form cube corner elements (*figure 2*).

ANSWERS TO APPLICANT'S ARGUMENTS

5. Applicant's arguments in the response filed December 2, 2008 regarding the 35 U.S.C. 102(b) over Nilson et al. (U.S. Patent No. 5,657,162) of record have been carefully considered but are deemed unpersuasive.

Applicant argues that Nilson does not disclose "a plurality of machined substrate pieces embedded in portions of the structured surface." Applicant states that the word "embed" is defined by as "to fix firmly in a surrounding mass." Applicant further adds that Nielsen neither describes nor shows metallic deposits that are firmly in a surrounding mass.

First, Examiner interprets "embed" to merely mean to make something an integral part, see Merriam-Webster on-line dictionary. Second, Applicant's machined substrate portion is embedded, "fix firmly in a surrounding mass," in same sense that Nielsen's coating is fix firmly

in a surrounding mass on the surface of the microprism formations. As disclosed in Applicant's specification on page 11, lines 5-20, that the replicated substrate and machined substrate are only bonded together with creates an interface. There is no description in the specification that the machined substrate is every more then surface bonded to the replicated substrate. The specification further disclose on page 12, line 26 through page 13, line 20 that the machined substrate is cut and some portions remained attached, while other portions are removed. Therefore, the machined portions are firmly surfaced bonded to the replicated substrate surface and surround by replicated substrate protrusions. Which is the same structure Nielsen shows, e.g. a coating substrate selectively bonded to the microprism substrate and the coating substrate surrounded by microprism substrate protrusions.

Applicant further argues that Nielsen does not describe or suggest "a transition line", which is defined in the speciation as "a line or other elongated feature that separated constituent faces of a compound face."

The examiner respectfully disagrees. As seen in figure 2 of Nielsen their are transition lines between the prisms.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Alicia Chevalier/
Primary Examiner, Art Unit 1794
3/12/2009